



Theory of Change

MNbS



Introduction

These slides contain the latest working version of the Theory of Change / project plan. The version number is in the top right corner of the slide.

The Theory of Change is **intended to inform the scope and implementation of the programme** to ensure that it is as effective as possible in enabling the mainstream adoption of nature-based solutions and to prioritise activities and outputs. It is a **live document responding to ‘internal’ programme changes alongside ‘external’ changes in the political and regulatory landscape**.

Slide 3 shows the overall Theory of Change with a high-level summary of activities.

A glossary giving further details of some of the more developed programme outputs is shared after the Theory of Change.

Version

The latest update is from 20th August 2025 and contains an update to the outputs as well as further detail on programme activities.





MNbS Theory of Change

Key

 Explained in the glossary

Vision

Impacts

Outcomes

Outputs

Activities

Mainstreaming nature-based solutions to deliver greater value

Delivery of more NbS across multiple landscapes at landscape scale

Widespread cross-sectoral support for NbS projects / approaches as default

1. Increased alignment of regulators, water companies and other actors and cross-sectoral collaboration in support of NbS

2. Increased support for NbS with decision makers

3. Greater long-term financial flows from a wider range of sources to fund NbS projects

4. Tools and processes adopted to reduce transaction costs and support greater uptake of NbS

5. Increased confidence in the planning, implementation, maintenance, monitoring and valuation of NbS

6. Regulatory changes which drive greater uptake of NbS

Increasing support

Clear messaging on NbS needs and benefits

Outcomes: 1 2

- Mapping the barriers and enablers to NbS
- Disseminating key messages and evidence to stakeholders through project communications, conferences and industry events

Policy, Regulation & Advocacy

Policy recommendations

Proposed changes to AMP9

Responses to key industry consultations

Outcomes: 1 2 3 6

- Co-developing policy and regulatory enablers with industry experts
- Leading independent reviews e.g. of the PR24 Draft Determinations
- Contributing to industry reviews and consultations e.g. Independent Water Commission
- Supporting implementation of industry review findings
- Advocating for policy and regulatory change incl. feeding into the PR29 planning process

Confidence & Evidence

Tracked Programme (name TBC) scoping

Outcomes: 1 2 4 5 6

- Scoping and establishing a Tracked Programme of NbS collaboratively with regulators to build the evidence base for NbS and support the development of evidence-led regulation
- Signposting key evidence and evidence gaps

Standardised methods & Collaboration

Categories

Optioneering & procurement changes

Common data framework

Common Value Framework

Risk Framework

Schedule of assumptions

Outcomes: 1 3 4 5

- Driving consistency and efficiency in valuing the benefits of NbS for decision making by developing a tried, tested and endorsed Common Value Framework and supporting guidance
- Reducing transaction costs of collaboration with multiple sectors e.g., by developing a standard categorisation of NbS, clarifying common assumptions and potential risk sharing approaches, and endorsing appropriate data sharing protocols

Governance, Funding & Finance

Enabling an investible pipeline

Finding finance approach

Regional coordinator

Governance for effective partnerships & accessing finance

Blended finance approaches

Outcomes: 1 2 3

- Increasing credibility of NbS with investors incl. a review of potential investment models and appropriate governance and engagement with a group of investors (Landscape Finance Group) to test concepts
- Aggregation of NbS purchase and investment opportunities including scoping blended finance options and financial vehicles
- Curation/creation of a set of 'investible projects'

Wider Activities

- Acting as impartial go-between between regulators, water companies and eNGOs and facilitating collaboration amongst key stakeholders within the MNbS programme and beyond
- Challenging, refining and validating our findings by testing them across eight UK regions

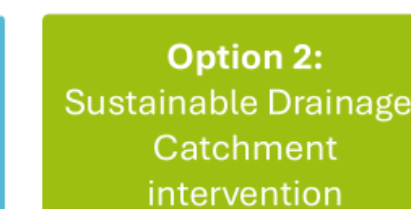


Glossary

MNbS



The CVF provides a repository of monetary values for investment outcomes common to the UK water sector with a clear and robust audit trail. It will **enable a fair assessment of the key role that nature-based solutions have in addressing multiple pressures, while delivering multiple benefits** to incentivise their long-term investment and delivery.



Worked example

[illegible]



NbS Categories

We have created a standard categorisation of NbS types to **facilitate project development and implementation and to enable better data management** throughout the planning and management of NbS.

Converging common categories of NbS used are:

- SuDS
- NFM
- River Restoration
- Coastal
- Treatment Wetlands

NbS categories				Description		Service measure										
Group	Category (Tier 1)	Intervention (Tier 2)	Definition	Water access	Water quality	Bank	Enabling	Carbon sink	Flood risk	PWS defence	Reduction in use	Energy saved	Wastewater reduction	Biodiversity habitat	Trackable environmental services	
Treatment wetlands	Surface flow constructed wetlands	Integrated constructed wetlands	Integrated constructed wetlands (ICW) are engineered to a degree, but also address pollution at catchment scale while maximising multiple benefits to local communities. They are typically larger than CTWs and can receive water from both piped and open sources.		Y		Y	Y					Y	Y	Y	
Treatment wetlands	Surface flow constructed wetlands	Free water surface constructed wetlands			Y		Y	Y					Y	Y	Y	
Treatment wetlands	Sub-surface flow constructed wetlands	Horizontal flow constructed wetlands			Y		Y	Y					Y	Y	Y	
Treatment wetlands	Sub-surface flow constructed wetlands	Vertical flow constructed wetlands	ponds and wetlands use, and although habitat creation is not a primary aim, they offer more multiple benefits than existing wastewater solutions, including stormwater management. Where best practice is available however, it		Y		Y	Y					Y	Y	Y	
Treatment wetlands	Constructed treatment wetlands	Floating treatment wetlands			Y		Y	Y					Y	Y	Y	
Treatment wetlands	Constructed treatment wetlands	Short rotation coppice			Y		Y	Y					Y	Y	Y	
Treatment wetlands	Constructed treatment wetlands	Skubeds			Y		Y						Y		Y	
Treatment wetlands	Constructed treatment wetlands	In-stream constructed wetlands	In-stream CWs are located directly in the river flow path where all water from the river/ditch flows through the wetland. They decrease flow rate.	Y	Y				Y					Y		
SuDS	Attenuation & infiltration SuDS	Trees	Trees can help protect and enhance the urban environment in a number of important ways including contributing to effective surface water management strategies through transpiration, interception, increased infiltration and phytoremediation.	Y	Y		Y	Y	Y	Y		Y	Y	Y	Y	
SuDS	Attenuation & infiltration SuDS	Rain gardens	small depressions in the ground that can act as infiltration ponds for roof water and other 'clean' surface water – i.e. water that is low in contamination levels. Rain gardens are most likely to be implemented on private property close to buildings. In order for roof water to reach a rain garden, property downpipes are often disconnected from the	Y	Y		Y	Y	Y	Y		Y	Y	Y	Y	



Risk Framework

The risk framework provides a basis for allocating risk across project participants through the project phases.

We will develop a repository of knowledge and experience around handling risk over the course of the MNbS programme.

Type 2 – start up grant provided

Type 2	Buyers	Investors	Landowners	Providers	Supply-side Conveners	Concluding Milestone	Note	Start up grant provider
1. Concept development			£		R	Parties agree to work together to set a project.	Convener does not carry financial risk in this model	£
2. Project convening / initiation design	£		£		R	Planning approved Finance raised SPV/CIC established to carry investment	NBS may be designed at this stage to a level sufficient for planning approval	££
3. NbS Design and Construction delivery	£	£££	£	£	R	Appropriate NBS built to standard.	Some more detailed design may be after planning approval. The risk carried by providers depends on the contract used.	
4. NbS performance	££	££	L		R	NBS perform over time	Risk sharing during the performance phase depends on the contractual arrangements.	



Common Data Framework





A common data framework will reduce management costs for NbS stakeholders.

A data protocol has been developed by the Rivers Trust.

It will cover reporting and asset management functions.

The Nature-based Solutions Database The data layers

There are three layers in the NbS Database

-  Projects
-  Interventions record
-  Inspections and maintenance record

1. Project points

2. Areas of intervention associated to the project (polygons & record)

3. Inspections and maintenance records





Schedule of Assumptions

Our aim is to create a schedule of assumptions for planning NbS projects which **provides a longlist of assumptions that need to be made (but not what they should be) and some guidance on what level of detail is needed at different scales of project.**

This guidance should make it easier to set up projects and grow them because it is clear what level of detail is required for planning of that project.

Planning context
Links to statutory planning or regulatory compliance, if any.
What is the screening and selection process for interventions?
What are the HRA/SEA/EIA requirements?
What option selection criteria are used?
What categorisation framework of NBS is used?
Are other non-NbS agricultural interventions and community based interventions included in the scheme?
What baseline assessment has been/will be done?
Benefit assumptions
What benefit assessment framework has been used?
What timelines have the benefits been assessed over (start/finish/growth/variation)
What tools are used to calculate benefits/outputs/outcomes?
Design assumptions
What is the design horizon?
What are the carbon assumptions
What climate scenarios are used in the assessment
Cost assumptions
What cost data has been used?
What maintenance and replacement costs over what time period have been assumed?
What monitoring costs and over what time period have been assumed?
What discount rate has been applied?
Procurement
How will the scheme be delivered (legal & procurement)
How are liabilities managed?
Management and payments
Payment by output or outcome?
What is the verification method?
Who is undertaking the verification?



Tracked Programme of NbS

We are working with regulators to develop the scope for a 'Tracked Programme of NbS' (the name of the programme is still tbc).

The aim is to **build a greater understanding of the evidence** for NbS in the water sector (including efficacy, benefits, risks, and value to nature and society) and to **support the development of evidence-led regulation**.

The scoping will involve:

- Defining an Evidence Framework
- Collating and reviewing existing evidence syntheses to create an evidence base
- Identifying key gaps in the evidence
- Prioritising projects to help close the gaps
- Agreeing an Operating Framework for how the programme will be managed and delivered

Catchment Type	Beaver re-introduction	Afforestation	Constructed wetlands	Temporary water storage features	Riparian restoration	Buffer strips/zones	Hedgerows and vegetative barriers	Instream wood	Peatland restoration	Instream substrate addition	Channel restoration	Floodplain reconnection	Permeable pavement	Green roofs	Bioretention systems/rain gardens	Sustainable soil management	Assisted natural regeneration
Type 7: Mixed Agricultural Areas																	
Low flow management	M 132	L 116b															
Flood management	M 132	L 116b		H 16, 57, 65								L 71				M 31a, 31c, 116a	
Nutrient and sediment management	M 132		H 27, 28a, 30, 33a, 60, 128b	M 16, 28b, 120a		H 134a, 134b	M 133	M 115a								M 31a, 31c	
Physico-chemical & biological water quality	M 132			L 206				M 115a									
Biodiversity & Habitat			L 27		H 1b, 23, 24	M 134d, 134e		H 4, 11a, 51, 125b			M 103	M 54					
Type 8: Arable on Lighter Soils																	
Low flow management		M 77, 91					L 123, 131					L 75				L 114	
Flood management	H 104, 64b	M 13c, 13c					M 123, 131	L 13a				L 75				H 37a, 37b, 37c, 114	
Nutrient and sediment management			H 7a, 7b, 35			M 134c	M 122, 123, 131				M 34	L 75				H 37a, 37b, 37c	
Physico-chemical & biological water quality											M 34						
Biodiversity & Habitat			L 59			L 134c		H 39, 106, 110		H 104, 108	H 34, 102, 107, 117	L 75					
Type 9: Cereals on Heavier Soils																	
Low flow management																M 83	
Flood management		L 8a		M 36												M 83	
Nutrient and sediment management			H 25, 28, 29a, 29b, 23c, 23d, 23e, 23f, 23g	M 36				M 115b									
Physico-chemical & biological water quality								M 115b									
Biodiversity & Habitat									M 103	M 12, 39	L 130						

Effects of NbS	
	Mostly positive effects reported
	Mixed effects/contradictory evidence reported
	Mostly negative effects reported
	No effects observed/detected
	No evidence available

Quantity and quality of evidence	
H	2 or more studies with substantial evidence
M	At least 1 study with evidence or multiple studies with some evidence
L	Evidence is limited, inconclusive or only modelled/hypothesised

**The screenshots above are taken from the EA's 'Multiple benefits of nature-based solutions: an evidence synthesis' report (published Feb 2025). We are planning to use this as a starting point for the Evidence Framework, though plan to review and expand on it to include further evidence categories and studies.



Finding Finance Approach

An interactive **process/ guide** intended to help **regional test teams better understand the financial and economic aspects of their projects** including where funding might be available, for whom, and under what conditions.

It serves as a **foundation for dialogue, supporting both the design phase and ongoing efforts to explore the economic viability of their initiatives.** We expect this guide to evolve iteratively as we engage with the regional tests, gaining insight into their unique contexts, stages of development, and the real-world questions they encounter.

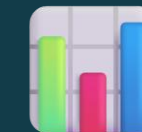
Content



1. Start with Demand: who will pay and why?



2. Map Available Funding Sources



3. Understand Financing Patterns



4. Understand Capital Types



5. Classify Your Project's Financial Profile



6. Key Governance Questions (from a financial perspective)



7. Build Trust and Demand Early



8. Practical Next Steps



9. Common Pitfalls



Policy Recommendations

Developed by bringing together a range of partners and stakeholders including regulators from a variety of sectors to discuss and understand the current barriers, and to develop recommendations for policy enablers that would facilitate widespread adoption of NbS in the UK.

We have input into the following reviews:

- Independent Water Commission (Cunliffe)
- Land Use Framework
- Defra Flood Budgets Consultation
- Defra Private Finance into Nature

Next steps:

- Advocacy strategy



Enabler 1 – Long-term strategic direction and targets



Enabler 2 - Improve regulatory frameworks to enable outcome-based, flexible delivery



Enabler 3 - Set up a water industry focused NbS “sandbox” where regulators will temporarily derogate regulations



Enabler 4 - Embed a catchment resilience-first approach in long-term water resources planning



Enabler 5 - Embed a catchment resilience-first approach in flood management



Enabler 6 – Local Planning Authority (LPA) expertise and consistency



Enabler 7 - Information-based policy instruments



Enabler 8- A coordinating organisation at sub-regional scale to help align planning